

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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CARNEGIE INSTITUTE OF WASHINGTON, :
et al.,                             :
                                     :
    Plaintiffs,                     :
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        -v-                         :    20-cv-189 (JSR)
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PURE GROWN DIAMONDS, INC., et al., :
                                     :
    Defendants.                   :
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CARNEGIE INSTITUTE OF WASHINGTON, :
et al.,                             :
                                     :
    Plaintiffs,                     :
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        -v-                         :    20-cv-200 (JSR)
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FENIX DIAMONDS, LLC,               :
                                     :
    Defendant.                     :
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OPINION & ORDER

JED S. RAKOFF, U.S.D.J.

Now before the Court are plaintiffs' motions, in each of the above-captioned actions, to dismiss certain of defendants' counterclaims and to strike certain of defendants' affirmative defenses - specifically, those sounding in inequitable conduct. For the reasons that follow, the Court finds that defendants' allegations, presumed true at this stage, state with sufficient particularity a plausible claim for inequitable conduct.

FACTUAL BACKGROUND

These two related cases were filed in January 2020 and are nearing the close of discovery. In an opinion and order issued May 8, 2020, the Court denied defendants' motions to dismiss the complaints and adopted certain claim constructions. 20cv189, ECF No. 46; 20cv200, ECF No. 42. The plaintiffs in both actions are Carnegie Institution of Washington ("Carnegie") and M7D Corporation ("M7D"). Carnegie and M7D call themselves "pioneers in the laboratory synthesis of high-clarity diamonds." Compl., 20cv189, ECF No. 1, ¶ 4, and they allege that Carnegie is the assignee of the two patents-in-suit, id. ¶ 2, and that M7D is the licensee of the patents with all rights to enforce them, id. ¶ 6.

The two patents-in-suit relate to methods for creating synthetic, lab-grown diamonds. Various techniques now exist for creating diamonds in a lab with "the same physical, chemical and optical qualities as diamonds mined from the earth." Id. ¶ 77. One technique for growing diamonds in a lab is called chemical vapor deposition (CVD). This process begins with a tiny diamond "seed," which is grown into a diamond by feeding hydrocarbon gases into a chamber under low pressure and then energizing the gases. Id. ¶ 78.

The motions at bar only concern one of the two patents-in-suit: Method of Making Enhanced CVD Diamond, U.S. Patent No. US RE41,189 (filed Jan. 30, 2009) (issued Apr. 6, 2010)

("the '189 Patent"). It teaches a method of "annealing," which is a process to repair defects in lab-grown diamonds, including to improve the color of diamonds that turned out dark or opaque. Plaintiffs assert that the '189 Patent teaches a superior method of annealing lab-grown diamonds that involves encapsulating the diamond in an outer body, usually of graphite, and applying very high temperatures and pressures.

In the affirmative defenses and counterclaims at issue here, defendants allege that the '189 Patent "is unenforceable because it was acquired through inequitable conduct or, in the alternative, because the '189 Patent is a reissue of a patent that was procured by inequitable conduct." Pure Grown Diamonds and IIA Techs. Amended Counterclaims and Affirmative Defenses, 20cv189 (JSR), ECF No. 56, Affirmative Defenses ("PGD AD") ¶ 8; Fenix Amended Counterclaims and Affirmative Defenses, 20cv200 (JSR), ECF No. 57, Affirmative Defenses ¶ 6 (same).¹ To support that claim, defendants make the following allegations, which the Court presumes true for the purpose of these motions.

Dr. Robert Frushour and Dr. Wei Li filed a patent application in June 2002 (the "First Application"), listing themselves as inventors. It was accompanied by a declaration signed by both

¹ On the issue of inequitable conduct, all defendants' counterclaims and affirmative defenses are identical. Hereafter, for brevity, the Court cites only the Pure Grown Diamonds and IIA Technologies Affirmative Defenses.

that asserted, "I believe I am . . . an original, first and joint inventor . . . of the subject matter which is claimed and for which a patent is sought on the invention entitled: METHOD OF MAKING ENHANCED CVD DIAMOND." PDG AD ¶ 9. Frushour was experienced with high-pressure/high-temperature diamond technology. Id. ¶ 10. Based upon prior experiments with natural diamonds, Frushour and Li thought the process they had used on natural diamonds might induce the same color change in CVD diamonds, and this formed the basis for the First Application. Id. ¶ 16. Frushour and Li worked together at Phoenix Crystal Corporation (which is not a party in these actions), to which they assigned their rights in the First Application. Id. ¶ 9.

In May 2004, attorney Paul Kokulis (representing Carnegie) contacted the prosecuting attorney for the First Application, James Singer. Id. ¶ 17. Kokulis claimed that Carnegie was the rightful inventor of the claims in the First Application. Id. Singer said he had no reason to believe this assertion and asked for proof, which Carnegie and Kokulis did not provide. Id. Two months later, Russell Hemley, Ho-Kwang Mao, and Chih-Shiue Yan (the "Carnegie Scientists") filed a patent application (the "Second Application") with a corresponding declaration listing the three of them as joint inventors, and seeking to patent the same subject matter as the First Application. They requested an interference proceeding, by which the Patent and Trademark Office

("PTO") might identify which group of inventors invented the commonly claimed invention. Id. ¶¶ 11-12. The Carnegie Scientists' declaration asserted that they had conveyed to Li the annealing steps to be used, but this was false. Id. ¶ 16.

In November 2004, the First Application issued as United States Patent No. 6,811,610 ("the '610 Patent"). Id. ¶ 11. The interference request was subsequently dismissed, and the PTO allowed the Second Application to "go abandoned." Id. ¶ 17.

Through a chain of assignments, by the time the '610 Patent issued, rights in it had been assigned to Diamond Innovations, Inc (which is not a party to these actions). In September 2008, Diamond Innovations, Inc. transferred its interest in the '610 Patent to Carnegie. Id. ¶ 21.

In January 2009, Carnegie filed an application seeking reissue of the '610 Patent (the "Reissue Application"). In the Reissue Application, Carnegie declared through its employee Gary Kowalczyk that reissue was warranted because of an "error": "Frushour is incorrectly named on the ['610 Patent] as an inventor and [the Carnegie Scientists] are incorrectly not named as inventors." Id. ¶ 22. Defendants allege that this statement was "knowingly false" or at least "willfully blind." Id. ¶ 22.

Defendants also allege that Carnegie failed to provide the PTO with certain relevant information. Carnegie, Kowalczyk, and the Carnegie Scientists had not contacted Frushour to let him know

that they intended to assert that he was not an inventor, nor did they tell the PTO that they did not contact Frushour. They also did not tell the PTO that the Carnegie Scientists had filed a prior application that had gone abandoned, or that Diamond Innovations, Inc. believed that Frushour and Li were the correct inventors (as the prosecuting attorney for the First Application had stated in 2004). Id. ¶ 22.

Defendants allege that if Carnegie had told the PTO these things, and if it had not submitted to the PTO a false declaration, then the PTO would not have reissued the patent. Id. ¶ 23. In reliance on the false declaration and in light of the failure of Carnegie, Kowalczyk, the Carnegie Scientists, and Li to live up to their duty of candor to the PTO, the PTO reissued the '610 Patent as the '189 Patent, which is one of the patents-in-suit. Id. ¶ 24.

Defendants also submit an alternative set of allegations. They contend that, if the Carnegie Scientists did, in fact, convey the annealing process to Li, then Li's original declaration with the First Application (i.e., that Frushour and he were the inventors) was false. Id. ¶¶ 42-43. Defendants claim that this taint on the original patent taints the reissued patent as well. Id. ¶ 48.

Because they offer these two sets of allegations in the alternative, defendants argue that it does not matter who the

inventors were because "[e]ither way, someone deliberately lied to the [PTO]." Id. ¶50.

LEGAL STANDARDS

The standard for evaluating counterclaims is familiar. "[A] new counterclaim, like all pleadings, must conform to the pleading requirements of Twombly and Iqbal." GEOMC Co. v. Calmare Therapeutics Inc., 918 F.3d 92, 99 (2d Cir. 2019).

As for affirmative defenses, Federal Rule of Civil Procedure 12(f) provides that a "court may strike from a pleading an insufficient defense." Courts in the Second Circuit used to strike affirmative defenses only if there was "no question of fact that might allow the defense to succeed." E.g., Inter-Am. Dev. Bank v. HG Trade Opportunities Fund N.V., No. 16 CIV. 9782 (PAE), 2017 WL 6025350, at *5 (S.D.N.Y. Dec. 4, 2017).² However, in 2019 the Second Circuit modified the "no question of fact" test to bring it in line with modern plausibility pleading. The court held that "the plausibility standard of Twombly applies to determining the sufficiency of all pleadings, including the pleading of an affirmative defense, but with recognition that, as the Supreme Court explained in Iqbal, applying the plausibility standard to

² Though not relevant here, an affirmative defense can also be struck if it is legally insufficient or if it would prejudice other parties, e.g., due to dilatory assertion of the defense. See Cognex Corp. v. Microscan Sys., Inc., 990 F. Supp. 2d 408, 418 (S.D.N.Y. 2013).

any pleading is a 'context-specific' task." GEOMC Co. v. Calmare Therapeutics Inc., 918 F.3d 92, 98 (2d Cir. 2019). While affirmative defenses must be plausible, the Second Circuit further explained that a court should sometimes apply a lesser "degree of rigor" to affirmative defenses because "[t]he pleader of a complaint has the entire time of the relevant statute of limitations to gather facts necessary to satisfy the plausibility standard. By contrast, the pleader of an affirmative defense has [significantly less time]." Id. at 98.

Here, the defendants have already amended their affirmative defenses, and these sets of affirmative defenses were filed about five months after the complaint. By the time they were filed, the parties had engaged in some discovery, including the deposition of Frushour. Given the relatively long period afforded defendants and the availability of significant discovery before they filed these affirmative defenses, the Court applies the same degree of rigor to the counterclaims and the affirmative defenses, accepting well-pleaded allegations as true and assessing whether they state a plausible claim or defense.

Inequitable conduct allegations are rooted in fraud and thus must be pled with particularity under Rule 9(b). Exergen Corp. v. Wal-Mart Stores, Inc., 575 F.3d 1312, 1328-29 (Fed. Cir. 2009). The pleading must state "the specific who, what, when, where, and how of the material misrepresentation or omission committed before

the PTO.” Id. at 1327. “Inequitable conduct requires a finding of both intent to deceive and materiality, and Therasense, Inc. v. Becton, Dickinson & Co. raised the bar on what is required under each prong.” Cognex Corp. v. Microscan Sys., Inc., 990 F. Supp. 2d 408, 418 (S.D.N.Y. 2013); see Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276, 1290 (Fed. Cir. 2011) (en banc) (“This court now tightens the standards for finding both intent and materiality in order to redirect a doctrine that has been overused to the detriment of the public.”).

To demonstrate scienter on a claim of inequitable conduct, “the facts pled must allow the court to ‘reasonably infer that a specific individual (1) knew of the withheld material information or of the falsity of the material representation, and (2) withheld or misrepresented this information with a specific intent to deceive the PTO.’” Cognex Corp., 990 F. Supp. at 418) (citations omitted) (quoting Therasense, 649 F.3d at 1290). The Court “may infer intent from indirect and circumstantial evidence.” Id.

The pleading must also show “but-for materiality.” For example, “[w]hen an applicant fails to disclose prior art to the PTO, that prior art is but-for material if the PTO would not have allowed a claim had it been aware of the undisclosed prior art.” Therasense, 649 F.3d at 1291.

ANALYSIS

A. Whether the Court May Consider Evidence Adduced by the Parties

As a threshold matter, the Court must determine whether it may consider certain evidence submitted with the parties' filings. The Court may not consider at this stage material outside the pleadings, with few exceptions. That said, a pleading is "deemed to include any written instrument attached to it as an exhibit, materials incorporated in it by reference, and documents that, although not incorporated by reference, are 'integral' to the [pleading]." Sira v. Morton, 380 F.3d 57, 67 (2d Cir. 2004) (citations omitted). The Court required supplemental briefing on this matter and issued a prior order. 20cv189 (JSR), ECF Nos. 81-83; 20cv200 (JSR), ECF Nos. 84-86.

Based upon the parties' supplemental briefing, as the Court stated in its prior order, the Court concludes that most of the documents that the parties attached to their respective filings may be considered on a motion to dismiss by virtue of being incorporated by reference in the pleadings, integral to the pleadings, and/or subject to judicial notice as a public record.

However, at this stage, the Court may not consider correspondence between James Singer and Paul Kokulis (Plaintiffs' Exhibit 8, PGD and IIA's Exhibit F) or Li's lab notebook (PGD and IIA's Exhibit D). Although the pleadings mention some such correspondence, and such a notebook, these documents were not

integral to the pleadings, incorporated by reference, or attached, and they are non-public documents that cannot be the subject of judicial notice.

B. The Sufficiency of Defendants' Allegations

The Court turns now to the specificity and plausibility of defendants' allegations. Their principal theory of inequitable conduct can be summarized as follows: (1) Frushour and Li invented the patented techniques. (2) Kowalczyk and the Carnegie Scientists made misrepresentations to the PTO because they knew that Frushour and Li invented the patented techniques and the Carnegie Scientists did not. (3) They also withheld information to mislead the PTO. (4) The PTO reissued the patent because of these misrepresentations and omissions. As to each step of defendants' theory, the Court now considers defendants' particularized allegations.

1. Inventorship

Defendants allege:

Frushour and Li already knew what process conditions to use when annealing CVD diamonds because (i) they had previously induced color change in natural diamonds using the exact same annealing conditions, (ii) they thought those same annealing conditions would also work to induce color change in CVD diamond, and (iii) that process did, in fact, successfully induce the same color change in CVD diamonds.

PGD AD ¶ 16. They further allege that the Carnegie Scientists "did not convey the claimed annealing steps to Frushour or Li," and deliberately lied about this to the PTO when the Second

Application was filed. Id. They also allege that "Li's contemporaneously maintained notebook does not indicate that [the Carnegie Scientists] provided any annealing conditions to use." Id. Finally, they allege that Frushour in his deposition testified that he disagreed with the Carnegie Scientists' declaration.

At this preliminary stage, these allegations are sufficiently particularized and support a plausible inference that Frushour and Li, and not the Carnegie Scientists, were properly listed as inventors.

Plaintiffs argue that the defendants' allegations rely entirely upon Frushour's beliefs about his inventorship, and that he and the Carnegie Scientists have always had a good-faith disagreement about this. They argue that, in his deposition, "Frushour had no memory of Carnegie's CVD and annealing activity at the time, and did not know the details of any communications between Carnegie and Li or the source of" certain CVD diamonds that Li may have received from the Carnegie Scientists and used in experiments related to the development of the patented techniques. Pls.' Mem. in Support of Mot. to Dismiss ("MTD") 20. Also, "Frushour failed to recognize entries in the notebook indicating that Li obtained diamonds from a Carnegie Scientist." Id.

It is certainly plausible that the Carnegie Scientists may have conveyed the steps to Li or conceived them first, but so, too, they may not have. At this preliminary stage, on the record

before it, the Court can only conclude that each of these scenarios is plausible. It is unsurprising that Frushour could not testify about the details of the Carnegie Scientists' prior inventive activities, if any. Indeed, neither Frushour nor the Carnegie Scientists have perfect information regarding the others. That is what discovery is for. For present purposes, defendants' allegations are particularized enough and support a plausible inference that Frushour and Li invented the patented material.

Finally, plaintiffs add that the defendants did not plead that Frushour and Li were the first ones to develop the techniques at issue. While it is true that defendants did not explicitly allege that Frushour and Li devised the method prior to Carnegie, drawing inferences in defendants' favor for purposes of this motion as the Court must, the pleading supports such an inference. E.g., PGD AD ¶ 24 (The Carnegie Scientists "did not convey the claimed annealing steps to Frushour or Li. . . . Frushour and Li already knew what process conditions to use.") (emphasis added).

2. Misrepresentations to the PTO Concerning Inventorship

Defendants allege that the Carnegie Scientists falsely asserted inventorship in a declaration submitted with the Second Application, and Kowalczyk knew of, or was willfully blind to, this deception, which he thus carried forward in the Reissue Application. PGD AD ¶ 22. On this point, defendants' essential allegation is that, "[u]pon information and belief," "[the

Carnegie Scientists], Carnegie, and Kowalczyk knew that they did not convey the claimed annealing steps to Frushour or Li but still chose to submit a false declaration to that effect in 2004 to the Patent Office" in connection with the Second Application. PGD AD ¶ 30.

The Court may consider the Carnegie Scientists' declaration on this motion because it is integral to the pleadings. The Carnegie Scientists' declaration says, in part, that Li had previously worked at Carnegie, that during April to August 2002, Carnegie sent diamonds to Li and directed him to anneal them, and that "[w]e believe that the [high pressure/high temperature] annealing processes discussed in [the First Application] are processes we directed Dr. Li to carry out because they are similar to the [high temperature/high pressure] processes that we asked Dr. Li to perform." Decl. of Carnegie Scientists, 20cv189 (JSR), ECF No. 69-7, ¶ 8 (July 12, 2004).

The Court has already concluded that it is plausible that Frushour and Li were the inventors of this annealing process. Given that the Carnegie Scientists were clearly aware of Frushour and Li's claims to inventorship in the First Application when they filed their declaration with the Second Application, and given their admission in the declaration that the annealing process described in the First Application was only "similar to" the process they asked Li to perform, defendants' allegations of

intentional misrepresentation are plausible. Moreover, because Carnegie, as the owner of the patent, was the declarant when the Reissue Application was filed, it is reasonable to assume that Kowalczyk as Carnegie's representative may have consulted with other Carnegie affiliates with knowledge about this matter -- i.e., the Carnegie Scientists. Therefore, one can draw a plausible inference that, when submitting a declaration in connection with the Reissue Application, Carnegie, and Kowalczyk as its agent, knew or willfully avoided knowing that the Carnegie Scientists did not invent the patented techniques.

Plaintiffs argue that defendants' allegations are imprecise as to who engaged in the alleged inequitable conduct. MTD 23. They are correct that Rule 9(b) requires specificity on this point. But defendants did specifically identify those whom it accuses of inequitable conduct: the Carnegie Scientists, Kowalczyk, and Li. The Court focuses on the allegations concerning the Carnegie Scientists and Kowalczyk.

As previously stated, the Court found plausible defendants' allegation that the Carnegie Scientists did not convey the annealing steps to Li but falsely averred that they did. If so, then either they told the truth to Kowalczyk, in which case he intentionally reiterated that misrepresentation in the Reissue Application; or they misled Kowalczyk, too, in which case their misrepresentation was nevertheless the basis for Carnegie's

misrepresentation to the PTO in the Reissue Application. Either way, if the Carnegie Scientists intentionally lied in their declaration, then that inequitable conduct also formed the basis for the Reissue Application. Defendants have, thus, described the circumstances of the alleged inequitable conduct with enough particularity.

3. Omissions Concerning Inventorship

In addition to alleging intentional misrepresentations, defendants allege that Carnegie, and Kowalczyk as its agent, omitted information to deceive the PTO. For example, Carnegie did not tell the PTO that it did not contact Frushour prior to filing the Reissue Application, or that Singer (the prosecuting attorney on the First Application) had said in 2004 that he had no reason to believe that the Carnegie Scientists were the inventors. The Court harbors doubts, for largely the reasons articulated by plaintiffs, see MTD 16-18, about whether Carnegie had an obligation to volunteer information like this to the PTO. However, the Court need not address defendants' allegations regarding omissions because the allegations of intentional misrepresentation suffice at this stage.

4. Materiality

There is no substantial dispute regarding materiality. The only issue presented to the PTO by the Reissue Application was the question of inventorship. On the assumption that the Carnegie

Scientists (and Carnegie and Kowalczyk, when they adopted the Carnegie Scientists' position) misled the PTO regarding inventorship, that misrepresentation was plainly material. Consider the alternative: if Carnegie had instead said that Frushour and Li were the inventors, then the PTO certainly would not have reissued the patent.

5. Alleged Inequitable Conduct as to the First Application

Finally, the Court turns to defendants' alternative set of allegations -- that "[i]f the July 12, 2004 Declaration of [the Carnegie Scientists] is to be believed, Li committed inequitable conduct with respect to the [First] Application." PGD AD ¶ 42. Specifically, defendants allege that Li committed inequitable conduct by asserting his and Frushour's inventorship while deliberately omitting the Carnegie Scientists, who had conveyed to him the annealing steps to use.

These allegations are plausible for largely the same reasons that the first set of allegations are. At this preliminary stage and on the limited record before the Court, it is plausible that the Carnegie Scientists' declaration is correct, and that Li received annealing instructions from Carnegie. This is enough to support a plausible inference that Li's inventorship declaration with the First Application, which omitted the Carnegie Scientists, intentionally deceived the PTO in a material way.

Perhaps Frushour and Li invented this annealing process and the Carnegie Scientists lied to the PTO. Perhaps the Carnegie Scientists invented the process and hired Frushour and Li to carry it out, and Li lied to the PTO. In concluding that both these alleged scenarios meet the low threshold of "plausible," and that defendants have described them with sufficient particularity to survive Rule 9(b), the Court does not mean to suggest that plaintiffs are trapped on the horns of the dilemma defendants propose. While defendants believe that it does not matter who invented the annealing process because "[e]ither way, someone deliberately lied to the [PTO]," PGD AD ¶ 50, there is another possibility. Perhaps Frushour and Li, on the one hand, and the Carnegie Scientists, on the other, each reasonably believed they had invented this new annealing process, and no one "lied to the [PTO]."

For now, however, defendants have plausibly alleged inequitable conduct. Plaintiffs' motions to dismiss are, accordingly, denied. The Clerk of Court is directed to close docket entry number 59 in 20cv189 (JSR) and docket entry number 66 in 20cv200 (JSR).

SO ORDERED.

Dated: New York, NY
August 31, 2020


JED S. RAKOFF, U.S.D.J.